

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/981,519 03/17/98 PFEIFFER

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EXAMINER

NGUYEN, S

ART UNIT PAPER NUMBER

2731

DATE MAILED:

05/09/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

## Office Action Summary

Application No. 08/981,519	Applicant(s) Pfeiffer
Examiner Steven Nguyen	Group Art Unit 2731

Responsive to communication(s) filed on Mar 17, 1998

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

### Disposition of Claim

- Claim(s) 1-7 is/are pending in the application.  
Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 Claim(s) \_\_\_\_\_ is/are allowed.  
 Claim(s) 1-7 is/are rejected.  
 Claim(s) \_\_\_\_\_ is/are objected to.  
 Claims \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.  
 The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.  
 The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.  
 The specification is objected to by the Examiner.  
 The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).  
 All  Some\*  None of the CERTIFIED copies of the priority documents have been  
 received.  
 received in Application No. (Series Code/Serial Number) \_\_\_\_\_  
 received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

- Notice of References Cited, PTO-892  
 Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_  
 Interview Summary, PTO-413  
 Notice of Draftsperson's Patent Drawing Review, PTO-948  
 Notice of Informal Patent Application, PTO-152

*Chi H. Pham*  
CHI H. PHAM  
SUPERVISORY PATENT EXAMINER  
GROUP 2700  
5/8/00

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 08/981519, filed on 03/17/98.

### ***Specification***

2. **Content of Specification**

- (a) **Title of the Invention:** See 37 CFR 1.72(a). The title of the invention should be placed at the top of the first page of the specification. It should be brief but technically accurate and descriptive, preferably from two to seven words.
- (b) **Cross-References to Related Applications:** See 37 CFR 1.78 and MPEP § 201.11.
- (c) **Statement Regarding Federally Sponsored Research and Development:** See MPEP § 310.
- (d) **Reference to a "Microfiche Appendix":** See 37CFR 1.96© and MPEP § 608.05. The total number of microfiche and the total number frames should be specified.
- (e) **Background of the Invention:** The specification should set forth the Background of the Invention in two parts:
  - (1) **Field of the Invention:** A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) **Description of the Related Art:** A description of the related art known to the applicant and including, if applicable, references to specific related art

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and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

- (f) **Brief Summary of the Invention:** A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) **Brief Description of the Several Views of the Drawing(s):** A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) **Detailed Description of the Invention:** A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. This item may also be titled "Best Mode for Carrying Out the Invention." Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (I) **Claim or Claims:** See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet. (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps.
- (j) **Abstract of the Disclosure:** A brief narrative of the disclosure as a whole in a single paragraph of 250 words or less on a separate sheet following the claims.

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(k) Drawings: See 37 CFR 1.81, 1.83-1.85, and MPEP § 608.02.

(l) Sequence Listing: See 37 CFR 1.821-1.825.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 3-4, 6-7, 12-13, 15, claim 4, lines 3-4 and claim 6, lines 3-4, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 6, the recitation "Discrete multi tone" does not refer to any previous element.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Amada (USP 4841521).

Amada discloses a method of bidirectional data transmission for two wire line wherein the transmitted data and received data are separated by the time slots that is subdivided from a frame (See Fig 1a, col 1, lines 45-59 and col 3, lines 1-11, the transmitted data "A to B" and received data "B to A" in one frame which is divided into a plurality of time sections "time slot").

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al (USP 4841521).

Amada does not disclose a number of time slots in a frame are 30 and transmitted time slot is 1. However, it would have been obvious to one skill in the art to divide a frame into the transmitted and received time slots such as the number of time slots divide into any numbers and using any number time slot for transmitted data.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al (USP 4841521) in view of Kageyama (USP 4144522).

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Amada fails to disclose a step of storing a transmission data into a buffer for transmitting to the receiving node and using ARQ method; However, in the same field of endeavor, Kageyama discloses a method of using an ARQ method for transmitting the data over a transmission channel until it does not receive a notifying of data transmission error from the received station (Col 20-36).

Since a method of using ARQ for retransmitting the data blocks is well known in the art at the time of invention. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of ARQ for retransmitting the data blocks when an error occurs as taught by Kageyama's system into Amada's system. The motivation would have been to control the occurrence of an error in data transmission between the transmitting and receiving sides.

10. Claim 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al (USP 4841521) in view of Huebner (USP 3798608).

Amada fails to disclose a claimed invention. However, in the same field of endeavor, Huebner discloses in the event of error the data are modified by a logic inversion before retransmitting (Col 7, lines 57 to col 8, lines 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of detecting an error in the transmitted data, modifying the transmitted data by a logic inversion before retransmitting the data as taught by Huebner's system

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into the Amada's system. The motivation would have been to reduce the retransmitted data if error occurs during the transmission.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al (USP 4841521) in view of Cioffi (USP 5625651).

Amada fails to disclose the claimed invention. However, in the same field of endeavor, Cioffi discloses a method of selecting a carrier frequency of DTM for synchronization with frequency powered signal to reduce interference (Col 5, lines 1-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a teaching of Cioffi such as selecting a carrier frequency according to the powered signal to reduce the interference into Amada's system. The motivation would have been to coordinate and reliably interpret signals sent from the remotes.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amada et al (USP 4841521) in view of Bowman (USP 5151896).

Amada fails to disclose the claimed invention. However, in the same field of endeavor, Bowman discloses a method of allowing the TDM being carried out synchronously on the two wire lines with a result that either transmission or reception is performed simultaneously on the two wire lines (Col 14, lines 47-62).

Since, Amada suggests that the transmitted and received data must be transmitted in the same frame (See Fig 1). Therefore, it would have been obvious to one of ordinary skill in the art

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at the time of the invention was made to apply a method of allowing a station to transmit or reception simultaneously as taught by Bowman into Amada's communication system.

*Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Snijders (USP 5509003) discloses a TDM data communication network wherein each frame is divided into a plurality of time slots.

Ayanoglu (USP 5719883) discloses a method of using ARQ and error control for DTM.

Weathers (USP 3956589) discloses a data communication system which uses ARQ for obtaining an error free during the data transmission.

Opoczynski (USP 5519830) discloses a TDM system for transmitting and receiving data via a data frame.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305-4378.

The fax phone number for this group is (703) 305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding

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should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Steven Nguyen  
Art Unit 2731  
May 5, 2000

  
CHI H. PHAM  
SUPERVISORY PATENT EXAMINER  
GROUP 2700  
5/8/00